

SEPARATOR FOR SECONDARY BATTERY

SEPARATOR FOR SECONDARY BATTERY

Patent Number: JP10247485
Publication date: 1998-09-14
Inventor(s): SUGIURA IZURU; AKITA SEIICHI; KURODA NOBUYUKI
Applicant(s):: NIPPON OIL CO LTD
Requested Patent: ☐ JP10247485
Application Number: JP19970050530 19970305
Priority Number(s):
IPC Classification: H01M2/16
EC Classification:
EC Classification:
Equivalents:

Abstract

PROBLEM TO BE SOLVED: To provide a separator having durability in an alkaline electrolyte, preventing it from being pierced by zinc dendrite, and preventing the internal short circuit of a battery for a long period by containing a partially saponified polyvinyl alcohol bridged film acetal-crosslinked by the oxidation decomposition reaction and acid treatment of the 1,2-diol unit of the film containing a partially saponified polyvinyl alcohol having a specific saponification value.

SOLUTION: A partially saponified polyvinyl alcohol having the saponification value of 70-98.5% is used. The average polymerization degree is preferably set to 50 or above, and the average thickness of the film containing the partially saponified polyvinyl alcohol is preferably set to 100 μ m or below. Methasodium periodate is preferably used for an oxidant used for acetal crosslinking. An acid catalyst generating H $^{+}$ is used for acid treatment, e.g. an inorganic acid such as sulfuric acid or hydrogen chloride, an organic acid such as acetic acid or benzoic acid, and a mixture of them are preferably used. The crosslinked film has low film resistance, it is used alone for a separator, and it can be combined or integrated with a woven fabric, a nonwoven fabric, or a fine porous film for use.